

Work Order ID 152374***152374***

Page 1

Monday, October 24, 2016 11:17:32 AM

Item ID: D135-692-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: EC135 Bearpaws

Start Date: 10/24/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/4/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: **DAS 21 9-89** Date: **OCT 24 2016** Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3049	B
DSI 9750	A
IIN-D135-692	B

NOV 14 2016

100

Document Control

0.00

100

DOCUMENT CONTROL

DAS 6 9-89

DC

Memo

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels per PPP D135-692-011 CHG003

4 DAS 27 9-89

NOV 17 2016

150

Pick Kit

0.00

150

Packaging

Memo

0.00

Packaging

4x DAS 26 9-89 NOV 17 2016 DAS 28 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Page 2

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Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: EC135 Bearpaws

Start Date: 10/24/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/4/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC4- 100% Inspect kits for completeness

0.00

160

QC

Memo

0.02

Quality Control

4 DAS
27
9-89

NOV 17 2016

170

Packaging

0.00

170

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D135-692-011

Location: _____

PPP Rev: fg CB4 DAS
28
9-89DAS
27
9-89

NOV 17 2016

DAS
21
9-89

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.07

Quality Control

NOV 17 2016

DAS
21
9-89

NOV 17 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Picklist Print

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Page 1

Work Order ID: 152374

152374

Parent Item: D135-692-011

D135-692-011

Parent Item Name: EC135 Bearpaws

Start Date: 10/24/2016

Required Date: 11/4/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:C04.02.17Blank size changed, Tolerance added Step
3KJ/JLM IPP REV:E AS PER DSI
9592/9587 REV A JLM VERIFIED BY:EC
IPP Rev:D 08-04-16 Added Step 2 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

QS100-M24S

Purchased

No

Each

19.0000

**

4

16

QS100-M24S

Clamp

DAS
27
9-89

Location

Loc Qty

Loc Code

ST545

19

m135603

19

160

f

276.5400

2

8

D2182B

Manufactured

No

***D2182B* 060**

Rubber Cushion - Black (\$Per Foot)

**

8

8

Location

Loc Qty

Loc Code

ST411

276.54

135093

276.54

(D2182B060) Cut 4 at 6.00"

D2274

Manufactured

No

160

Each

201.0000

8

32

D2274

Radius Block

**

8

32

Location

Loc Qty

Loc Code

FG

12

86855

12

ST006

189

150353

34

150676

155

D3049-1

Manufactured

No

160

Each

0.0000

2

8

D3049-1

Bearpaw

DAS
27
9-89

**

8

8

NOV 14 2016

152406

DAS
6
9-89

DAS
28
9-89

DAS
2628
9-89

NOV 17 2016

DAS
26
9-89

NOV 17 2016

DAS
328
9-89

NOV 17 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
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					Completed By	
					Lead hand / Supervisor Approval Verification	
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Page 2

Work Order ID: 152374

152374

Parent Item: D135-692-011

D135-692-011

Parent Item Name: EC135 Bearpaws

Start Date: 10/24/2016

Required Date: 11/4/2016

Start Qty: 4.00

Required Qty: 4.00

D2529 Manufactured No 160 Each 603.0000 8 32

D2529

Washer

DAS
26
9-89
28
-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST008

603

150080

500

150996

103

NOV 17 2016

32x

D2519 Manufactured No 160 Each 67.0000 4 16

D2519

Clamp

DAS
26
9-89
28
-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST542

67

150142

7

150835

60

NOV 17 2016

7x

9x

AN4-13A Purchased No Each 265.0000 8 32

AN4-13A

Bolt

DAS
26
9-89
28
-89

DAS
27
9-89

Location

Loc Qty

Loc Code

FG

20

122808

20

GA

35

m134634

19

m135470

16

ST343

210

m134852

36

m135470

174

NOV 17 2016

32x

DQA: _____ Date: _____



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Work Order ID: 152374

152374

Parent Item: D135-692-011

D135-692-011

Parent Item Name: EC135 Bearpaws

Start Date: 10/24/2016

Required Date: 11/4/2016

Start Qty: 4.00

Required Qty: 4.00

MS21042L4

Purchased

No

160

Each

2,214.000

8

32

MS21042L4

Nut

DAS
26
9-89

DAS
28
9-89

NOV 17 2016

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

34

m133363

34

GA

260

m135058

260

OVER007

1500

m135774

500

m135864

1000

ST303

420

m135704

420

32x

NAS1149D0463J

Purchased

No

160

Each

2,230.000

8

32

NAS1149D0463J

Washer

DAS
26
9-89

DAS
28
9-89

NOV 17 2016

DAS
27
9-89

Location

Loc Qty

Loc Code

cnc

200

M135671

200

GA

135

M134508

32

M135056

103

ST260a

1000

M135767

1000

ST263

895

M135530

95

M135671

800

32x

Any-114

DAS
27
9-89

M135945 X16

SP/6-11-17

DAS
28
9-89

Monday, October 24, 2016 11:17:35 AM

Shop Packet Print

Page 3

DQA: _____ Date: _____

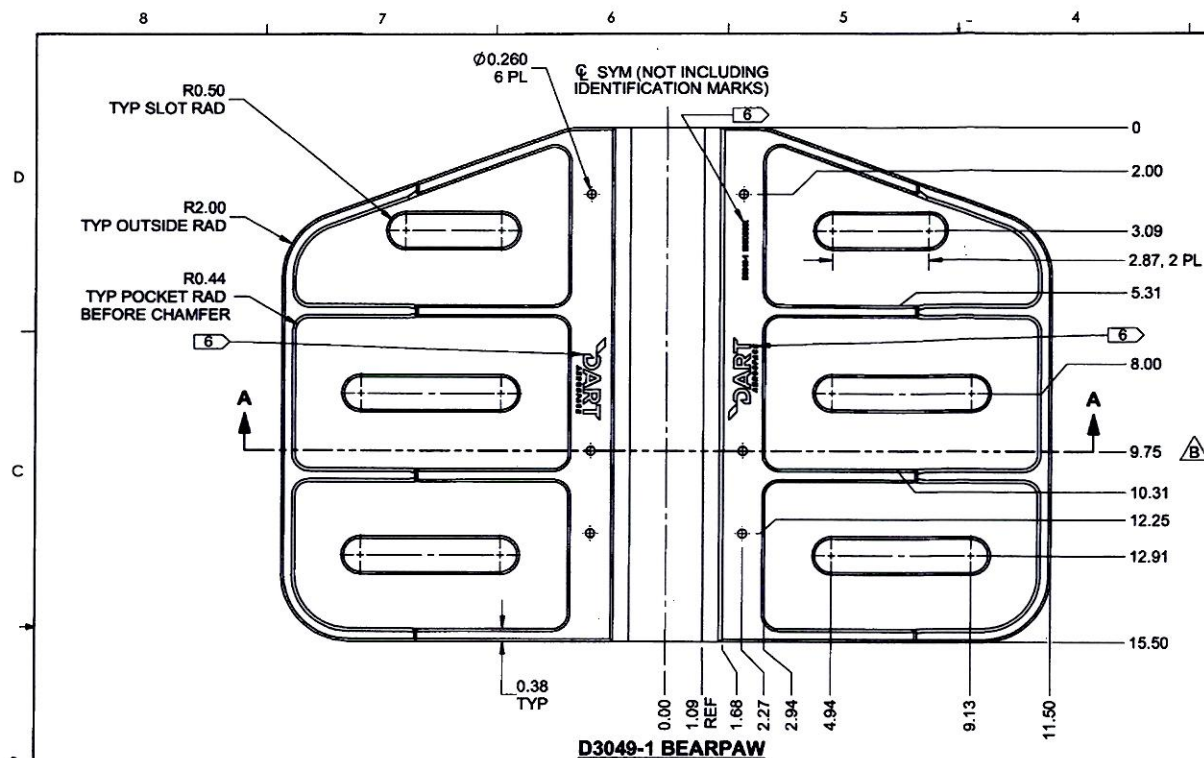


WORK ORDER NON-CONFORMANCE / UPDATE

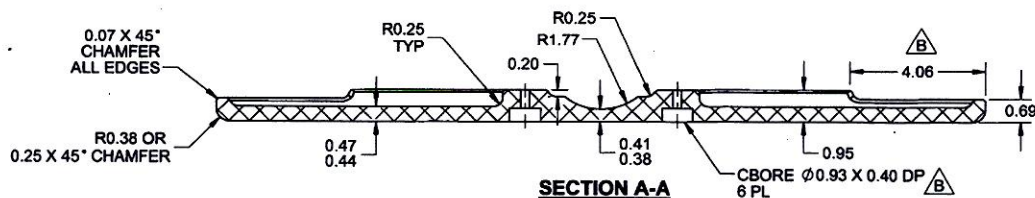
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Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
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Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 152374 MLS
10-10-24



NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.00 THICK MACHINED TO 0.95 (REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE DART LOGO, PART NUMBER "D3049-1" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3 TO MAX DEPTH OF 0.012 AS ILLUSTRATED
- 7) WEIGHT: 5.94 lbs
- 8) NON DIMENSIONED FEATURES PER CAD FILE "D3049-1-REV.B.STP"

RELEASED
2016-07-26
ECN 16-591

APPROVED

B	REVISE DWG TO CURRENT STANDARDS, ADDED 2 ADDITIONAL CBORE HOLES IN C&I. UPDATE DIM'S DUE TO CAD ERROR; Ø0.93 WAS Ø0.75		ML	16.06.01
A	NEW ISSUE		RF	01.10.18
REV.	DESCRIPTION		BY	DATE
DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR		
DRAWN	ML			
CHECKED	DB	DRAWING NO.		REV. B
MFG. APPR.	JLM	D3049		SHEET 1 OF 1
APPROVED	HS	TITLE		SCALE
DE APPR.	DS	BEARPAW		NTS
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
WORK ORDER WITH ATTACH SUBJECT TO AGREEMENT AND A TRILLED COPY OF THE RETURNED TO THE SHOOT COPY				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IN D135-692 REV. B AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D135-692 REV. 1
REF. FAA STC: SR01042SE
REF. TCCA LETTER OF ACCEPTANCE: 120S-GA-08-52
REF. EASA STC: 10038103

1.0 PURPOSE

The purpose of this Dart Service Instruction is to allow customers with D135-692-011 Bearpaws at CHG 002 and earlier to modify the D3049-1 Bearpaw to relocate the aft most D2519 Clamp and D2182B060 Rubber Cushion by up to 2.5" (63.5 mm) further forward to avoid interference with the snow ski provisions on the OEM skidtubes. At CHG 003 and later, the D3049-1 Bearpaw is supplied with the provisions to relocate the clamp and cushion.

2.0 INSTALLATION PROCEDURE

2.1 Jack up the aircraft. Ensure the skidtubes are serviceable.

NOTE: For D135-692-011 Bearpaw Kits at CHG 002 and prior, drill Qty 2x Ø0.26" (6.60 mm) holes through the D3049-1 Bearpaws as indicated in Figure 1 of this Dart Service Instruction. Counter bore the holes on the underside of the bearpaws Ø0.94" to Ø1.00" (23.87 mm to 25.40 mm) and to a depth of 0.40" (10.16 mm).

2.2 If installing the D135-692-011 Bearpaw Kit with the D135-692-041 Wearplate Kit, align the D3719-041 Wearplate under the D3049-1 Bearpaw as shown in Figure 1 of this service instruction and install the bearpaw and wearplate onto the skidtube using the hardware shown in Figure 2, 3 and 4 of this service instruction.

2.3 If installing the D135-692-011 Bearpaw Kit without the D135-692-041 Wearplate Kit, align the D3049-1 Bearpaw as shown in Figure 1 of this service instruction and install the bearpaw onto the skidtube using the hardware shown in Figure 5 of this service instruction.

NOTE: The bearpaws should be installed over the skidtube wearshoes. The D3049-1 Bearpaw may be relieved to clear skidtube wearshoe mounting screws provided the relief leaves 0.375" (9.53 mm) thickness.

CAUTION: The torque on the nuts should be limited to 20 in-lb (2.3 Nm).

2.6 Lower the aircraft.

2.7 Update the aircraft log book as applicable to indicate installation of the DSI 9750-011 Install Modification, D135-692-011 Bearpaws and D135-692-041 Wearplate Kit.

A	NEW ISSUE	ML	16.06.01
REV.	DESCRIPTION	BY	DATE
DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 1 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

3.0 PARTS LIST

The DSI 9750-011 Clamp Relocation Kit can be procured from Dart to install D135-692-041 on D135-692-011 at CHG 002 and earlier, and includes hardware for Qty 2x skid tubes.

Qty -011	Part Number	Description
X	DSI 9750-011	Clamp Relocation Kit
8	D2529	WASHER
4	AN4-11A	BOLT
4	MS21042L4	NUT

The parts list for IIN-D135-692 and ICA-D135-692 is amended as follows:

Qty -011	Qty -041	Part Number	Description
X		D135-692-011	BEARPAW INSTALLATION
	X	D135-692-041	WEARPLATE KIT
4		D2182B060	RUBBER CUSHION
8		D2274	RADIUS BLOCK
2		D3049-1	BEARPAW
8	8	D2529	WASHER
4		D2519	CLAMP
	2	D3719-041	WEARPLATE
	4	AN4-11A	BOLT
8	8	AN4-13A	BOLT
8	12	MS21042L4	NUT (OR MS21042-4)
8	8	NAS1149D0463J	WASHER
4		QS100M24S	CLAMP

4.0 WEIGHT AND BALANCE

There is a negligible weight and balance change associated with this modification.

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>g</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 2 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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DQA: _____ Date: _____

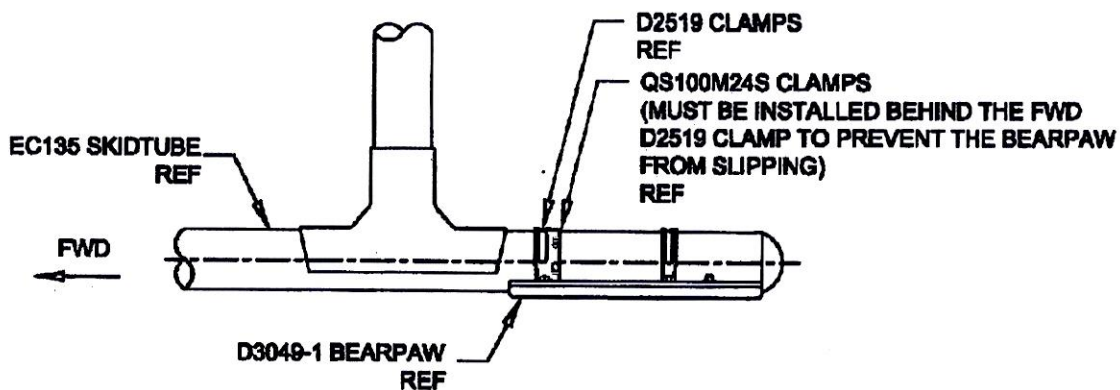
WORK ORDER NON-CONFORMANCE / UPDATE



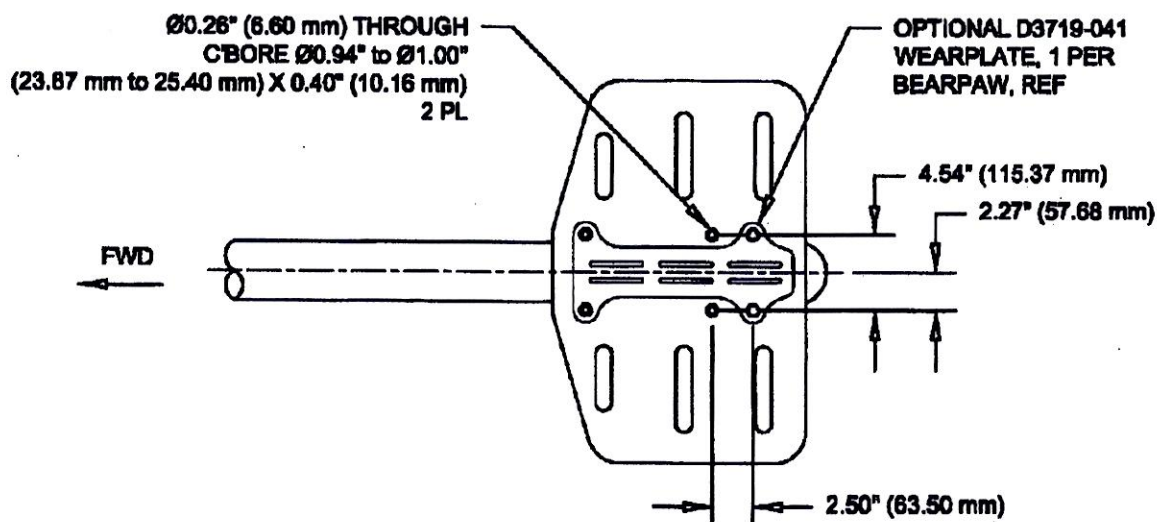
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							



SIDE VIEW



BOTTOM VIEW

FIGURE 1: MODIFICATION OF D135-692-011 INSTALLATION
NOT TO SCALE

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DRAWN	ML		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 3 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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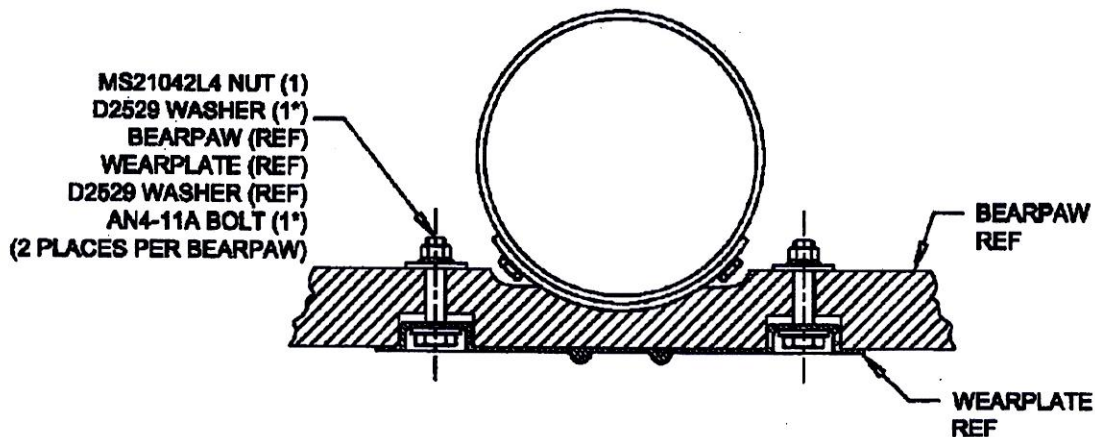


QA Closed: _____ Date: _____

Work Order update only ☐

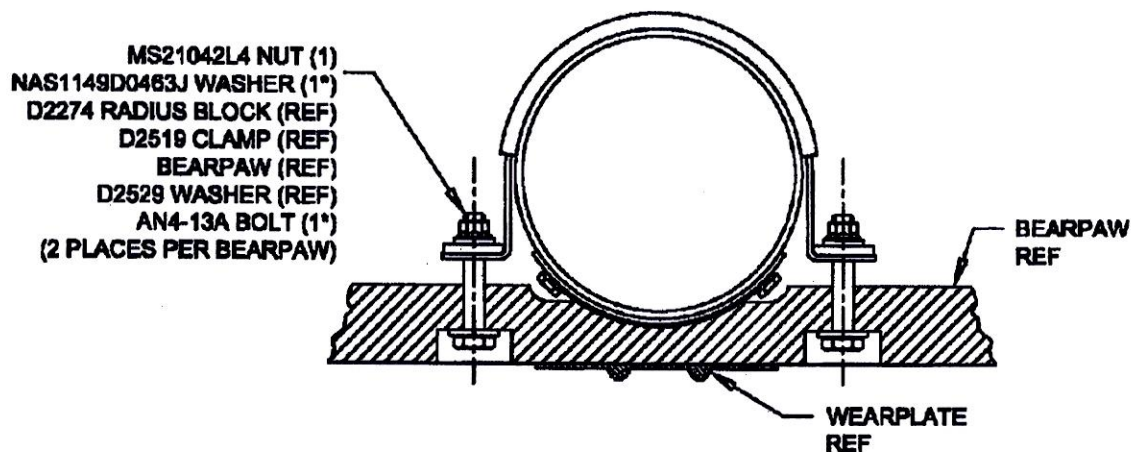
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								



* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-11A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

FIGURE 2: HARDWARE INSTALLATION AT AFT HOLE LOCATION
(WITH WEARPLATE, NOT TO SCALE)



* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-13A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

FIGURE 3: HARDWARE INSTALLATION AT MID HOLE LOCATION
(WITH WEARPLATE, NOT TO SCALE)

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>CH</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 4 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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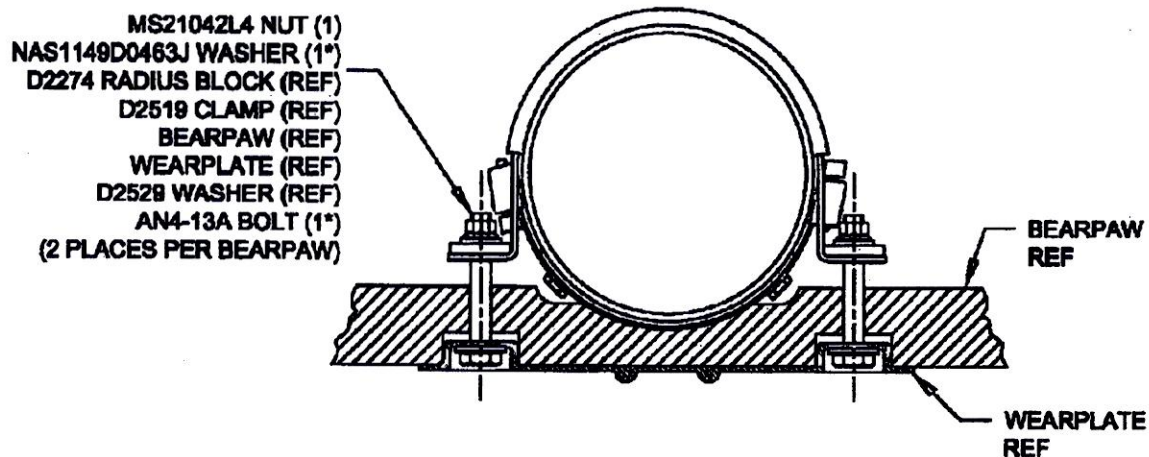
WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

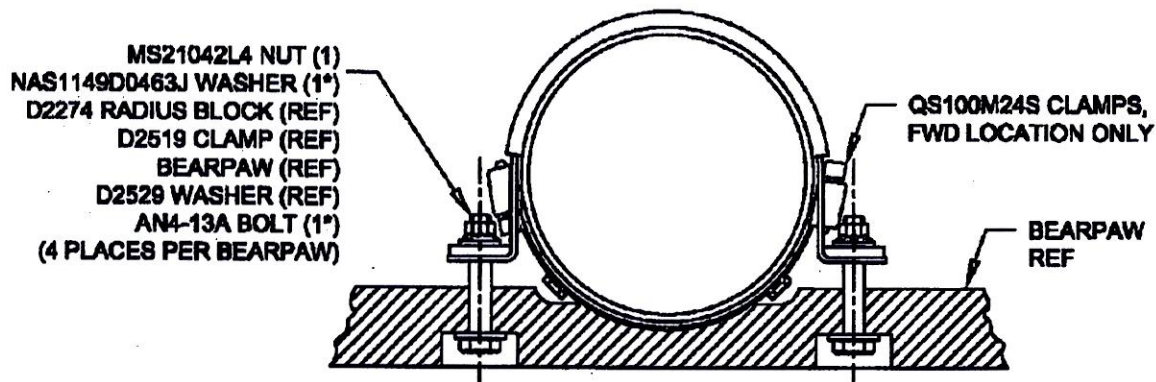
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					



* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-13A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

**FIGURE 4: HARDWARE INSTALLATION AT FWD HOLE LOCATION
(WITH WEARPLATE, NOT TO SCALE)**



* ADDITIONAL NAS1149D0463J WASHERS MAY BE INSTALLED UNDER THE NUTS TO ENSURE 1.5-4 THREADS IN SAFETY ON THE BOLTS. IT IS ALSO ACCEPTABLE TO REPLACE THE AN4-13A BOLTS WITH LONGER OR SHORTER AN4 BOLTS, IF REQUIRED.

**FIGURE 5: HARDWARE INSTALLATION
(WITHOUT WEARPLATE, NOT TO SCALE)**

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>q</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 5 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

3.0 PARTS LIST

The DSI 9750-011 Clamp Relocation Kit can be procured from Dart to install D135-692-041 on D135-692-011 at CHG 002 and earlier, and includes hardware for Qty 2x skid tubes.

Qty -011	Part Number	Description
X	DSI 9750-011	Clamp Relocation Kit
8	D2529	WASHER
4	AN4-11A	BOLT
4	MS21042L4	NUT

The parts list for IIN-D135-692 and ICA-D135-692 is amended as follows:

Qty -011	Qty -041	Part Number	Description
X		D135-692-011	BEARPAW INSTALLATION
	X	D135-692-041	WEARPLATE KIT
4		D2182B060	RUBBER CUSHION
8		D2274	RADIUS BLOCK
2		D3049-1	BEARPAW
8	8	D2529	WASHER
4		D2519	CLAMP
	2	D3719-041	WEARPLATE
	4	AN4-11A	BOLT
8	8	AN4-13A	BOLT
8	12	MS21042L4	NUT (OR MS21042-4)
8	8	NAS1149D0463J	WASHER
4		QS100M24S	CLAMP

4.0 WEIGHT AND BALANCE

There is a negligible weight and balance change associated with this modification.

DESIGN	ML	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ML		
CHECKED	<i>q</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9750	SHEET 2 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	INSTALL MODIFICATION	NTS
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Work Order ID 152374***152374***

Page 1

Monday, November 14, 2016 9:10:49 AM

Item ID: D135-692-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: EC135 Bearpaws

Start Date: 10/24/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 11/4/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3049	B
DSI 9750	A
IIN-D135-692	B

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels per PPP D135-692-011 CHG003

DAS
21
9-59

NOV 14 2016

150

Pick Kit

0.00

150

Packaging

Memo

0.00

Packaging